Claims

What is claimed is:

1. A method of treating or preventing a disease or condition selected from the group consisting of diabetes, maturity-onset diabetes of the young (MODY), latent autoimmune diabetes adult (LADA), impaired glucose tolerance (IGT), impaired fasting glucose (IFG), gestational diabetes, and metabolic syndrome X, comprising administering to a mammal an effective amount of a PDE10A inhibitor.

2. The method of claim 1, wherein diabetes is type 2 diabetes.

3. The method of claim 1, further comprising administering insulin, insulin derivatives, PPAR ligands, sulfonylurea drugs, α-glucosidase inhibitors, biguanides, PTP-1B inhibitors, DPP-IV inhibitors, 11-beta-HSD inhibitors, GLP-1 and GLP-1 derivatives, GIP and GIP derivatives, PACAP and PACAP derivatives, or secretin and secretin derivatives in combination with said PDE10A inhibitor.

4. The method of claim 3, wherein said PPAR ligand is selected from rosiglitazone, troglitazone, and pioglitazone.

5. The method of claim 3, wherein said sulfonylurea is selected from glibenclamide, glimepiride, chlorpropamide, glipizide, glyburide, and tolbutamide.

6. The method of claim 3, wherein said α-glucosidase inhibitor is selected from acarbose, miglitol, and voglibose.

7. The method of claim 1, further comprising administering HMG-CoA inhibitors, nicotinic acid, fatty acid lowering compounds, lipid lowering drugs, ACAT inhibitors, bile sequestrants, bile acid reuptake inhibitors, microsomal triglyceride transport inhibitors, or fibric acid derivatives in combination with said PDE10A inhibitor.

8. The method of claim 1, further comprising administering an anti-obesity agent selected from the group consisting of β-3 agonists, CB-1 antagonists, neuropeptide Y5 inhibitors, appetite suppressants, and lipase inhibitors in combination with said PDE10A inhibitor.

9. The method of claim 1, further comprising administering an anti-hypertensive agent selected from the group consisting of β-blockers, calcium channel blockers, diuretics, renin

inhibitors, ACE inhibitors, AT-1 receptor antagonists, ET receptor antagonists, and nitrates in combination with said PDE10A inhibitor.

10. A method of treating or preventing secondary causes of diabetes selected from glucocorticoid excess, growth hormone excess, pheochromocytoma, and drug-induced diabetes, comprising administering to a mammal an effective amount of a PDE10A inhibitor.

11. A method of increasing the sensitivity of pancreatic β-cells to an insulin secretagogue, comprising administering to a mammal an effective amount of a PDE10A inhibitor.

12. The method of claim 11, wherein said insulin secretagogue is selected from GLP-1, GIP, PAC/VPAC receptor agonists, secretin, nateglinide, meglitinide, repaglinide, glibenclamide, glimepiride, chlorpropamide, and glipizide.

13. A method of treating or preventing dementia, comprising administering to a mammal an effective amount of a PDE10A inhibitor.

14. A method of treating or preventing a cardiovascular disorder selected from hypertension, ischemic heart disease, myocardial infarction, stable and unstable angina, peripheral occlusive disease and ischemic stroke, comprising administering to a mammal an effective amount of a PDE10A inhibitor.

15. A method of treating or preventing a urogenital tract disorder selected from incontinence, stress incontinence, benign prostatic hyperplasia, erectile dysfunction, female sexual dysfunction, and prostatic hypertrophy, comprising administering to a mammal an effective amount of a PDE10A inhibitor.

16. The method of claim 16, wherein said female sexual dysfunction is female sexual arousal disorder.

17. A method for identifying compounds which are useful for the treatment of diabetes, maturity-onset diabetes of the young (MODY), latent autoimmune diabetes adult (LADA), impaired glucose tolerance (IGT), impaired fasting glucose (IFG), gestational diabetes, metabolic syndrome X, dementia, cardiovascular disorders, and urogenital tract disorders, comprising the step of determining whether the compound inhibits PDE10A.

18. A method for the treatment of diabetes, maturity-onset diabetes of the young (MODY), latent autoimmune diabetes adult (LADA), impaired glucose tolerance (IGT), impaired

fasting glucose (IFG), gestational diabetes, metabolic syndrome X, dementia, cardiovascular disorders, and urogenital tract disorders, comprising administering to a mammal an effective amount of a compound identified by the method of claim 17.

20. A pharmaceutical composition comprising a therapeutically effective amount of a compound which inhibits PDE10A in combination with a pharmaceutically acceptable carrier.

21. A pharmaceutical composition comprising a therapeutically effective amount of a compound which inhibits PDE10A in combination with a pharmaceutically acceptable carrier and one or more pharmaceutical agents.

22. The pharmaceutical composition of claim 21, wherein said pharmaceutical agent is selected from the group consisting of insulin, insulin derivatives, PPAR ligands, sulfonylurea drugs, α-glucosidase inhibitors, biguanides, PTP-1B inhibitors, DPP-IV inhibitors, 11-beta-HSD inhibitors, GLP-1 and GLP-1 derivatives, GIP and GIP derivatives, PACAP and PACAP derivatives, and secretin and secretin derivatives.

23. The pharmaceutical composition of claim 21, wherein said pharmaceutical agent is selected from the group consisting of β-3 agonists, CB-1 antagonists, neuropeptide Y5 inhibitors, appetite suppressants, and lipase inhibitors.

24. The pharmaceutical composition of claim 21, wherein said pharmaceutical agent is selected from the group consisting of HMG-CoA inhibitors, nicotinic acid, fatty acid lowering compounds, lipid lowering drugs, ACAT inhibitors, bile sequestrants, bile acid reuptake inhibitors, microsomal triglyceride transport inhibitors, and fibric acid derivatives.

25. The pharmaceutical composition of claim 21, wherein said pharmaceutical agent is an anti-hypertensive agent selected from the group consisting of β-blockers, calcium channel blockers, diuretics, renin inhibitors, ACE inhibitors, AT-1 receptor antagonists, ET receptor antagonists, and nitrates.